

VIRGIN RIVER BASIN

09405500 NORTH FORK VIRGIN RIVER NEAR SPRINGDALE, UT

LOCATION.--Lat $37^{\circ}12'35''$, long $112^{\circ}58'40''$, in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 41 S., R. 10 W., Washington County, Hydrologic Unit 15010008, Zion National Park, on right bank 0.2 mi downstream from point of diversion of Springdale Canal, 0.5 mi downstream from Pine Creek, and 1.9 mi northeast of Springdale.

DRAINAGE AREA.--344 mi².

PERIOD OF RECORD.--May 1913 to June 1914, June to November 1923, April to June, August and September 1925 (fragmentary), October 1925 to current year. Published as Zion Creek near Springdale 1913-14 and as Mukuntuweap River near Springdale 1923, 1925-32. Published as combined flow of river and Springdale canal 1923, 1925-88.

GAGE.--Water-stage recorder. Crest-stage gage since May 31, 1995. Elevation of gage is 3,970 ft above sea level, from topographic map. May 13, 1913, to June 30, 1914, nonrecording gage at site 3.8 mi downstream at different datum. June 6, 1923 to Sept. 1925, nonrecording gage at site 0.8 mi upstream. Oct. 1, 1925 to Dec. 14, 1949, nonrecording gage 50 ft downstream and 0.34 ft higher.

REMARKS.--Records good except those for flows greater than 300 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Some regulation of low flows by Kolob Reservoir (20 mi upstream) and several diversions for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,150 ft³/s Dec. 6, 1966, gage height, 12.98 ft, from rating curve extended above 2,000 ft³/s on basis of drift measurement at gage height 6.7 ft, and slope-area measurement at gage height 10.25 ft; minimum estimated, less than 5.0 ft³/s Apr. 12, 1995, result of landslide 1.0 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*)

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0145	a 916	3.52				
Jan. 3	0820	a 2,830	6.49	Sept. 15	0930	a 2,290	5.69
Aug. 10	0715	a* 3,560	* 7.50	Sept. 26	0435	a 2,680	6.28

^a From rating curve extended above 1,600 ft³/s on the basis of slope-area measurement at gage height 10.25 ft.

Minimum daily discharge, 31 ft³/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	47	46	60	66	54	147	192	64	e43	39	42
2	47	47	49	65	67	64	122	168	63	e43	37	43
3	42	48	41	648	63	58	121	163	62	e41	37	47
4	38	50	43	124	62	62	118	168	58	e39	69	134
5	37	49	51	87	62	52	112	163	59	e41	75	58
6	35	47	74	62	53	61	98	166	59	e41	46	50
7	35	44	59	49	49	62	99	154	59	e40	41	46
8	33	47	91	63	58	66	95	149	61	e40	38	74
9	33	48	71	61	56	69	105	136	64	40	38	127
10	34	46	276	64	62	75	98	130	61	39	372	71
11	33	47	193	61	63	83	90	119	59	37	74	64
12	33	45	78	65	63	93	96	116	55	37	109	52
13	34	45	67	63	55	99	89	110	56	37	58	70
14	36	46	60	59	56	93	89	107	63	37	47	137
15	35	47	45	52	62	96	95	101	73	36	45	613
16	35	48	51	60	63	93	114	96	67	36	43	107
17	34	49	53	52	62	96	136	94	60	36	42	71
18	36	50	36	55	62	100	166	90	58	35	43	66
19	36	50	39	60	63	118	185	89	54	36	42	63
20	37	49	49	64	67	146	188	101	53	37	41	60
21	37	82	53	65	58	169	221	96	52	37	39	56
22	34	454	56	61	61	162	231	90	50	53	39	54
23	38	113	59	87	58	158	241	84	48	42	38	51
24	39	72	49	79	54	164	204	90	46	37	37	49
25	42	64	47	80	62	141	172	95	46	36	36	52
26	40	59	50	311	59	141	173	81	45	36	35	732
27	44	51	56	136	67	157	199	76	e44	37	34	98
28	58	50	56	86	61	175	212	74	e44	48	33	67
29	48	59	56	72	---	182	211	71	e44	44	33	58
30	45	46	56	66	---	157	196	70	e44	43	32	52
31	52	---	59	67	---	160	---	67	---	41	44	---
TOTAL	1191	1999	2069	2984	1694	3406	4423	3506	1671	1225	1736	3264
MEAN	38.4	66.6	66.7	96.3	60.5	110	147	113	55.7	39.5	56.0	109
MAX	58	454	276	648	67	182	241	192	73	53	372	732
MIN	31	44	36	49	49	52	89	67	44	35	32	42
AC-FT	2360	3970	4100	5920	3360	6760	8770	6950	3310	2430	3440	6470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

WY	1994	1994	1994	1997	1995	1995	1993	1993	1995	1995	1995	1997
MEAN	46.2	53.0	52.9	62.0	74.1	128	210	254	107	54.1	47.6	47.7
MAX	69.0	74.4	73.5	96.3	110	271	644	813	404	113	71.1	109
MIN	33.4	35.9	36.6	39.0	47.8	54.0	76.2	55.8	36.5	34.5	34.4	24.8
(WY)	1992	1990	1990	1991	1990	1990	1990	1990	1990	1994	1990	1989

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1989 - 1997

ANNUAL TOTAL	22273	29168	94.8
ANNUAL MEAN	60.9	79.9	
HIGHEST ANNUAL MEAN			207
LOWEST ANNUAL MEAN			43.6
HIGHEST DAILY MEAN	580	Feb 21	1993
LOWEST DAILY MEAN	27	Sep 4	1990
ANNUAL SEVEN-DAY MINIMUM	29	Sep 3	May 4 1993
ANNUAL RUNOFF (AC-FT)	44180	57850	Aug 5 1994
10 PERCENT EXCEEDS	84	155	Aug 2 1994
50 PERCENT EXCEEDS	51	59	
90 PERCENT EXCEEDS	35	37	
			34

e Estimated